

***VISITOR PLAN
ADVISORY COMMITTEE
REPORT***



**Prepared for the city of Boulder
Open Space Department
March 10, 2000**

***VISITOR PLAN
ADVISORY COMMITTEE
REPORT***

**Prepared for the city of Boulder
Open Space Department
March 10, 2000**

EXECUTIVE SUMMARY

In 1998, the city of Boulder Open Space Department embarked on an important task - establishing a process for determining what passive recreational uses would be allowed on Open Space and how those activities should be managed. With the volume and types of recreational use increasing, it became vital for the department to have a consistent, supportable, and effective process for evaluating the appropriateness of recreational uses.

A citizen advisory committee, representing a spectrum of community perspectives, was formed to assist in creating the Open Space Visitor Plan. The Visitor Plan Advisory Committee's Report is based on the expertise of members and extensive public input. This report reflects their views and best efforts to summarize public input and provide direction as requested by Open Space staff in further developing the Visitor Plan.

In addition to two well-attended public workshops, the Visitor Plan Advisory Committee (Advisory Committee) oversaw a telephone survey designed to collect the perspectives of the broad community, providing objective data to guide their deliberations. The scientific telephone survey contacted 410 citizens between July 27 and August 4, 1999.

Among the survey results:

- Respondents defined passive recreation as activities that maintain high natural aesthetic qualities; that cause, at most, minor harm to the natural environment; that are relaxing, calming, quiet and leisurely; that are neither motorized nor organized sports-like activities;
- Sixty-two percent feel the management balance between recreation and environmental preservation on Open Space is "about right;" of those who felt the balance was wrong, nearly twice as many people felt that too much emphasis was placed on recreation;
- Thirty-nine percent believe the primary mission of Open Space is growth management and buffering; 23 percent listed recreation as the primary mission and 23 percent listed preserving wildlife and habitat;
- Sixty-seven percent said hiking, walking or running is their favorite Open Space activity;
- Twenty-seven percent saw bicycles as a source of conflict with other users and 26 percent named dogs as a problem; and
- Potential criteria for evaluating recreational uses were given the following order: impacts on vegetation and wildlife; enhanced appreciation of nature; impacts to views or other aesthetic values; benefit to the community; and conflicts with other visitors.

Consistent with the City of Boulder Open Space Charter, the Advisory Committee has defined passive recreation, considered the relationship of passive recreation with other Open Space

purposes, developed passive recreation goals and objectives, and developed criteria for

evaluating recreational activities.

The key findings of the Advisory Committee are:

- Activities acceptable as passive recreation are non-motorized, are compatible with other Open Space uses and purposes, require minimal facilities and services, and do not degrade the environment;
- Priority should be given to preservation of sensitive areas;
- A variety of uses should be accommodated;
- Passive recreational uses should enhance the public's understanding of the natural environment; and
- The public should be actively included in decision making and in stewardship of Open Space lands and resources.

The Advisory Committee has recommended a two-tier process for evaluating and managing recreational activities, beginning with a "coarse level" look that is gradually refined to a more specific "fine level." The Advisory Committee conducted a "coarse level" evaluation to identify some initial considerations related to various recreational activities and these considerations are listed in Appendix 3. The "fine level" assessment researches information about the activity's potential impacts, benefits, and sensitivities of the specific location where it would likely occur.

After further research and considering what could be done to lessen the activity's impact on the environment, an interdisciplinary team of Open Space staff will make a recommendation on the activity to the Open Space Board of Trustees. Commercial activities would be subjected to a similar, but more rigorous review.

The Advisory Committee recommends that the evaluation process remain flexible and adaptable to changing conditions and new activity requests. They urge that the public continues to be involved in the process and that Open Space staff works with user groups to create a code of ethics for each passive recreational activity.

With the presentation of this report to the Open Space Board of Trustees on March 22, 2000 the Advisory Committee is officially dissolved, although members are encouraged to remain actively involved in the process.

Open Space staff will continue to refine the recommendations, with the draft Visitor Plan expected by early summer. Following further public review and comment, the recommendations will go to the Open Space Board of Trustees for final approval.

1. INTRODUCTION

1.1 Purpose of the Visitor Plan

The purpose of the Visitor Plan is to develop policies that will guide management of passive recreational activities, trails, access, commercial operations, and future monitoring efforts on city of Boulder Open Space lands. The Visitor Plan will provide overall policy guidance for visitor uses. Site specific management actions will be developed in subsequent planning efforts. The goals of the Visitor Plan are:

- Collect and incorporate community input throughout the development and implementation of the Visitor Plan;
- Collect and analyze visitor use information and policies;
- Develop policies for providing and managing appropriate visitor uses;
- Develop guidelines for locating trails and visitor facilities;
- Establish standards for providing visitor services;
- Develop policies for commercial activities / concessions;
- Implement policies, standards, and guidelines pertaining to visitor use; and
- Establish and implement a long term plan for monitoring visitor use.

1.2 Background and need for Visitor Plan

The city of Boulder is surrounded by more than 29,000 acres of Open Space lands. These diverse lands help to preserve the natural environment of the Boulder area, while providing buffers between Boulder and surrounding communities. Open Space provides areas for passive recreation, wildlife, and agriculture. These lands are very popular among recreationists and approximately 1.7 million visits occur annually. National research and recent Open Space studies indicate visitor use is steadily increasing and dramatic increases are expected as surrounding areas experience intense growth.

Urban sprawl along the Front Range and surrounding areas has limited the amount of land available for passive recreation and native plant and animal habitat, along with the expanding population. New recreational uses add to the pressure already put on existing trails and natural areas. These pressures and increased use have resulted in visitor conflicts, safety concerns, trail widening, proliferation of social or undesignated paths, trail maintenance concerns, crowded trails, overflowing parking lots, degradation of native plant and animal communities, invasion of non-native plants and animals, conflicts with important agricultural uses, and loss of significant historical sites. Left unmanaged, the quality of the outdoor recreation experience will suffer and impacts to natural and cultural resources will increase.

2. ROLE OF VISITOR PLAN ADVISORY COMMITTEE

A citizen advisory committee was formed during the summer of 1999 to assist with community involvement and to develop recommendations for the Visitor Plan. The mission of the Visitor Plan Advisory Committee (Advisory Committee) was to work with the Open Space staff to collect, analyze, and summarize information and public comments that will guide preservation of passive recreation and natural resources for current and future generations.

Members of the community were asked to participate in the Advisory Committee based upon the following agreements and scope of work.

2.1 Advisory Committee Member Agreements

1. Represent a cross-section of community viewpoints and have experience working with community issues. Members are expected to share their viewpoints; represent the best interests of the community; and work collaboratively with other Advisory Committee members, the community, and staff in developing an Open Space Visitor Plan.
2. Listen to and incorporate citizen input on the Open Space Visitor Plan including appropriate uses, access guidelines, and related facility and service needs. The Advisory Committee will prepare a report with the assistance of Open Space staff that will summarize public input and recommend guidelines which will be evaluated and used by staff to draft the Visitor Plan.
3. Attend Advisory Committee meetings, community workshops, and with Open Space staff assistance, prepare a report summarizing their work. Once the report is complete and has been presented to the Open Space Board of Trustees, the Advisory Committee's role is complete.
4. All Advisory Committee meetings will be open to the public and there will be opportunities to comment directly to committee members and staff. Members of the Advisory Committee encourage all interested citizens to participate and let their views be known through the community workshops and other opportunities provided throughout the development of the Visitor Plan.

2.2 Scope of work

- Review and integrate public input from earlier workshops and outreach efforts.
- Clarify and prioritize issues.
- Assist in the research, review, and presentation of information related to the issues, including potential management actions.
- Evaluate goals and outcomes of the first community workshop including:
 - Goals and objectives for passive recreation.

- Definition of passive recreation.
- Draft criteria for evaluating appropriate activities.
- Work with staff and public at the second community workshop to:
 - Establish criteria and a process to evaluate recreational activities.
 - Using the criteria and process, identify considerations associated with recreational activities and develop recommendations on how to manage activities determined to be acceptable.
- Assist in developing a report to Open Space staff summarizing input from the Advisory Committee and citizens on the issues identified above (goals and objectives, definition of passive recreation, criteria for evaluating activities, and develop a range of considerations which will be evaluated and used by staff to draft the Visitor Plan).

2.3 Visitor Plan Advisory Committee members

Brent Wheeler

Project Manager
City of Boulder
Open Space/Real Estate Department
66 South Cherryvale Road
Boulder, CO 80303
303-441-4495 ext. 261
Fax: 303-499-6181
wheelerb@ci.boulder.co.us

Larry MacDonnell

Open Space Board of Trustees

Suzanne Bohan

Open Space Board of Trustees

Ricky Weiser

Bruce Bland

Jen Lamb

Cathy Bickell

Charlie Rollins

Scott Westfall

Mike Figgs

Suzanne O'Neill

Correspondence to members of the Open Space Visitor Plan Advisory Committee can be sent to:

**Open Space Visitor Plan Advisory Committee
66 South Cherryvale Road
Boulder, CO 80303**

3. PLANNING PROCESS AND PUBLIC PARTICIPATION

A variety of opportunities have been established to encourage citizens to express their ideas during each step in developing the Open Space Visitor Plan. The steps in developing the Visitor Plan are:

1. Identify issues and concerns, develop goals, and establish the process for public involvement and developing the Visitor Plan;
2. Collect and analyze information on visitor uses;
3. Develop initial alternatives;
4. Draft plan with proposed policies;
5. Adopt and implement plan; and
6. Monitor and revise as needed.

Step 1

The first step began in the winter of 1998. The initial issues, goals, process for public involvement, and developing the Visitor Plan were drafted. A public workshop, an open house, and an Open Space Board of Trustees' meeting were held in February, 1999 to review the initial scope of the project and existing information. These meetings provided opportunities for public and Board input on the draft issues and goals to be addressed in the Visitor Plan and to establish the process for public involvement.

Steps 2 and 3

The primary objectives for steps two and three are to collect and analyze information on visitor uses and develop initial alternatives.

Many of the issues that are part of the Visitor Plan are complex and difficult to resolve. Public participation in these discussions is important to ensure issues are identified and evaluated thoroughly.

A citizen advisory committee was formed during June of 1999. The Open Space Visitor Plan Advisory Committee is made up of ten citizens, including two Open Space Board members, and an Open Space staff member.

Workshops held on September 9 and November 18, 1999 provided members of the public an opportunity to identify visitor issues, to review information related to the issues, explore potential management tools to resolve the issues, and begin developing specific policy and management options to be used in the draft Visitor Plan.

Open Space Visitor Plan Advisory Committee Report

A scientific public opinion phone survey was conducted during the summer of 1999 to assess community views and attitudes about visitor uses (see section 4).

Additional informational and public participation opportunities included meetings with the Open Space Board of Trustees and members of the Visitor Plan Advisory Committee, articles in the Daily Camera newspaper, meetings with local clubs and organizations, the Visitor Plan Hotline, Channel 8 programs, KGNU and KWAB radio programs, periodic newsletters, and the Visitor Plan web site.

The Advisory Committee has combined ideas expressed by citizens with their own expertise, experience, and knowledge to prepare this report. The Advisory Committee's recommendations will be presented to the Open Space Board of Trustees and staff on March 22, 2000.

Step 4

Open Space staff will use the Advisory Committee's report and direction from the Open Space Board of Trustees to draft the Visitor Plan. A draft of the Visitor Plan will be available for public review in the summer of 2000.

Step 5

Public input will be incorporated into the draft and a final Visitor Plan will be presented to the Open Space Board of Trustees for its review and approval in late summer or early fall of 2000.

Step 6

Open Space staff will develop implementation strategies and integrate approved management actions into annual work programs and capital improvement projects for review and approval by city council, through the city's budget process. The Visitor Plan will be monitored and evaluated as needed.

4. CITIZEN PHONE SURVEY

The Advisory Committee report was guided by a scientific poll conducted between July 27 and August 4, 1999 by the Public Information Corporation of Littleton, Colorado. This poll provides demographically balanced information about the attitudes and preferences of the voting age population of the City of Boulder. A total of 410 interviews were conducted and the maximum sampling error is 4.7%. Initial poll questions, suggested by the Open Space staff, were screened and modified by the Advisory Committee, Bob Tonsing of The Public Information Corporation, and Dr. Jerry Vaske (professor in the Department of Recreation and Tourism at Colorado State University), the Open Space Board of Trustees, various Open Space user groups, and interested members of the public.

Because the results of the poll provide a fair and accurate sample of the general voting age population, it is the most salient and representative method of gauging public feelings and desires. However, the information derived from the poll is not always adequately “fleshed out.” Furthermore, some important topics are not covered by the poll at all. The Advisory Committee therefore relied on other forms of public input for this important additional information.

The following is a summary of the results of the poll:

Purposes of Open Space

Interviewees were asked what they regarded as the single primary purpose of having Open Space. 39% indicated it is for “managing growth/development and providing a buffer between communities.” The only two other major purposes, tied at 23% each, are “environmental preservation” and “providing recreation.” These priorities have not changed significantly from two previous polls (1992 and 1994). Two minor purposes are “quality of life” (7%) and “quietness/views/aesthetics” (5%).

Managing growth and buffering, the most popular purpose, is accomplished simply by acquiring the land. The public clearly indicated a desire that Open Space then be used for preserving the natural environment, for providing passive recreational experiences, and for preserving the aesthetic qualities of the land.

The Advisory Committee strove to ensure that the preservation of the natural environment (with its aesthetic qualities) and the provision of high quality passive recreation would be accomplished in a manner that will be sustainable for both in the long term.

Balancing Passive Recreation and Environmental Preservation

Since passive recreational use and environmental preservation sometimes compete for the same

resources, interviewees were asked if current Open Space management practices are achieving an appropriate balance between these two purposes.

Nearly two-thirds (62%) felt the current balance is “about right.” Of those who felt the balance was wrong, twice as many people (20%) felt there was too much emphasis on recreation (not enough on environmental preservation) than felt (11%) there was too much emphasis on preservation (not enough on recreation).

In a related question, 93% of the interviewees indicated it is important to consider the negative impact of recreation on the natural environment when making management decisions (62% “very important”, 31% “somewhat important”).

When recreation and preservation efforts conflict, the following management options are the four most preferred by interviewees: education of users, temporary closures, limiting use to designated trails, and limiting activities that cause greatest impact.

These results indicate that citizens enjoy recreating on Open Space and place a high priority on doing it in a way that is sensitive to long term environmental preservation. They also feel that current management practices seem to be appropriate for accomplishing the task. The Advisory Committee’s recommendations and criteria reflect these results.

Definition of “Passive Recreation”

In an open-ended question, interviewees were asked what the term “passive recreation” means to them. There were many definitions given. However, most of the responses contained one or more of the following four key concepts: 1) the importance of having and maintaining high natural aesthetic qualities as part of the recreational experience and when Open Space is viewed from a distance; 2) the desire that recreational activities cause, at most, only minor harm to the natural environment and wildlife habitats; 3) the provision of low intensity recreational activities that are relaxing, calming, quiet and leisurely; and 4) the absence of motorized and organized/structured sports-like activities.

All of these elements were incorporated into the definition of passive recreation and the recommendations and criteria for determining which activities and commercial uses are appropriate on Open Space.

Current Passive Recreational Uses

By far, the main passive recreational use interviewees engage in is hiking (67%). Other significant uses include biking (22%), jogging (11%), and dog walking (10%). Several minor uses were indicated; however only fishing (3%) and picnicking (3%) are engaged in by more than 1% of the respondents. Only 8% of the interviewees indicated they did not use Open Space or used it rarely. Clearly, a very large portion of the local population uses Open Space and two-

thirds use it for hiking. Provision of high quality passive recreational experiences is a main priority in the Advisory Committee's management recommendations.

One important question asked interviewees to rate the appropriateness of five criteria for determining which recreational activities were appropriate for Open Space. Interviewees indicated that all five are highly appropriate for this purpose. The five listed in order (beginning with the most appropriate) are: the potential for negatively impacting the environment, the potential for positively increasing the user's appreciation of nature, the potential for negative impacts to aesthetic values, the benefit the activity has to the community, and the potential for increasing user conflicts.

The Advisory Committee incorporated all of these criteria into the screening procedure for determining the appropriateness of a given recreational activity.

Passive Recreational Quality

An overwhelming 93% of the interviewees indicated the quality of their passive recreational experiences on Open Space is "excellent" (58%) or "good" (35%). This result indicates a very high degree of satisfaction with passive recreational quality and underscores the importance of "fine-tuning" rather than making major changes to current management practices.

Problems experienced by passive recreational users appeared in two questions on the survey. The results of one question indicated that the most significant problem is conflicts with certain other types of uses, particularly with bicycles (27% saw this as problematic) and dogs (26% - due to feces and dogs out of control). In another question, trail crowding was seen as a problem by 16% of passive recreational users (15% chose "crowded", 1% "extremely crowded").

The four most popular management options for dealing with passive recreational conflicts and crowding according to the interviewees are buying more land, educating users, enforcing laws, and limiting problem activities.

The Advisory Committee's suggestions for management include numerous recommendations and goals for ensuring and improving passive recreational quality.

Passive Recreational Facilities & Services

Eighty-nine percent (89%) of interviewees felt Open Space facilities are "excellent" (39%) or "good" (50%). Many diffuse suggestions were made for improvements, but all registered low frequency responses (5%-12%). The suggestions dealt with trail construction and maintenance, signs, trash, parking, restrooms, enforcement of leash laws, and numerous other minor responses.

Nearly two-thirds of interviewees felt visitor services are excellent (20%) or good (45%). 21%

had no response. Only two suggested improvements garnered more than a 2% response. They are “more public information” (20%) and “more law enforcement” (11%). More than half of the respondents made no suggestions at all.

These results indicate a fairly high level of satisfaction with facilities and services, but a need for some minor improvement in some areas.

5. RECOMMENDATIONS ON POLICY ISSUES

The Advisory Committee has worked with Open Space staff to develop a process by which staff can effectively evaluate and manage existing and potential recreational visitor uses. The Advisory Committee has discussed at length many of the controversial issues involved with passive recreation management on Open Space.

The Advisory Committee has attempted to address these concerns, regardless of the personal preferences held by individual committee members, by working collaboratively with staff to develop recommendations that include extensive public input and the results of the phone survey.

The Advisory Committee's recommendations focus on four key areas:

1. Definition of passive recreation;
2. Relationship of passive recreation to other Open Space purposes;
3. Goals and objectives for managing passive recreation; and
4. Criteria to evaluate the appropriateness of specific recreational uses on Open Space.

The Advisory Committee has based its work on the following guiding principles:

- The Visitor Plan is predicated upon and must conform to the existing Open Space Charter (see Appendix 1);
- When making decisions regarding recreational issues, staff should use fair and objective criteria and the best available information;
- Staff should develop and implement these decisions in a fair and consistent manner, with appropriate public input;
- Passive recreational use of Open Space should not create significant adverse impacts to the environment;
- Where there is a reasonable doubt about the nature of potential impacts, or where all other considerations are equal, preference will be given to protecting the environment;
- Visitors are welcome on Open Space, as long as their use follows adopted rules, regulations, and management plans; and
- It is recognized that circumstances will change, and our knowledge of natural resource management will evolve. All parties should remain flexible so management changes can be made in a timely and appropriate manner.

A key goal of the Advisory Committee is for the Visitor Plan to establish a clear process and fair

standards by which the public can evaluate the decisions and actions of the staff. The Advisory Committee realizes that even should staff adhere to this process and use these standards, individual citizens and interest groups may still disagree with staff decisions.

5.1 Definition of passive recreation

The Advisory Committee has defined passive recreation as non-motorized activities that:

- Offer constructive, restorative, and pleasurable human benefits that foster appreciation and understanding of Open Space and its purposes;
- Are compatible with other passive recreational uses;
- Do not have significant adverse impacts to natural, cultural, scientific, or agricultural values;
- Occur in an Open Space setting, which is an integral part of the experience; and
- Require only minimal visitor facilities and services directly related to safety and minimizing passive recreational impacts.

5.2 Relationship of passive recreation to other purposes of Open Space

Preservation of land for passive recreational use is an important purpose of Open Space and a variety of opportunities will be provided for visitors to enjoy these diverse lands. These activities also enhance many visitors' understanding of the natural environment and create community support for Open Space.

Passive recreation requires careful management in order to balance with other Open Space purposes. Passive recreation management must be consistent with resource preservation goals and compatible with the long term preservation and restoration of natural, cultural, and agricultural resources. Some areas of Open Space may not be suitable for passive recreation because of their ecological sensitivity, relatively unfragmented nature, or purchase agreements (e.g., conservation easements on privately owned land may limit or exclude public access). The purpose of this document and the Visitor Plan is to provide guidance on how appropriate activities will be managed in those areas suitable for passive recreation.

The Open Space Department should seek to provide high quality passive recreational opportunities compatible with the values and purposes of Open Space lands. Visitors should be welcomed to enjoy these lands in a manner that preserves the quality of their experience and the natural environment. Recognizing that many Open Space areas have multiple purposes, passive recreational uses are generally more compatible with areas of Open Space that are used primarily as buffers to control development or for agricultural purposes. In areas with sensitive natural, cultural, agricultural, or scientific research values, passive recreational uses may not be allowed, may need to be limited, or only allowed under special conditions. An area's suitability for

passive recreational use will be determined by evaluation of the best available information and measured against approved suitability criteria.

In many cases providing passive recreation and preserving the environment are not mutually exclusive. If site-specific conflicts arise between the various purposes of Open Space, priority will be given to preservation of sensitive natural and cultural resources (historic and prehistoric).

These resources are irreplaceable, are integral to the quality of the passive recreational experience, contribute to a better understanding of how humans relate to their environment, and should be preserved whenever possible. However, some impacts associated with passive recreation may be acceptable in less sensitive areas.

Passive recreational experiences and natural values must be sustainable. Management strategies should attempt to ensure that future passive recreational experiences and the condition of the natural environment should be of the same quality or better than they are today.

Passive recreational uses should foster appreciation and understanding of Boulder's Open Space program. Visitors should be encouraged to appreciate nature and become stewards of the land through education and interpretation.

5.3 Goals and objectives for managing passive recreation

A clear set of goals, objectives, and management strategies have been developed and will be used to guide management of passive recreation on Open Space lands. Goals are statements of qualitative outcomes. Objectives articulate what will be achieved and are specific, measurable, achievable, and have realistic time lines. Management strategies are the approaches that will be followed to accomplish the objectives and will be developed later in the Visitor Plan.

The community has been instrumental in developing these goals through public workshops and the Advisory Committee. Ongoing public involvement and support will be critical to help implement these goals and objectives. Goals should emphasize providing high quality passive recreation where compatible with preserving the environment and enhancing community involvement and support. Management should strive to be compatible with surrounding public and private lands whenever possible.

The draft goals and objectives described below and on the following pages outline the initial concepts that will be further developed by Open Space staff and incorporated into the Visitor Plan.

Goal #1: Manage and preserve land to provide a variety of high quality passive recreational activities, outdoor education opportunities, and visitor services where consistent with

overarching environmental values.

Objectives

- 1.1** Provide a range of passive recreational activities and outdoor education opportunities consistent with the Open Space Charter and where compatible with other purposes.
 - Maintain and improve a sense of welcome to visitors.
 - Attempt to preserve an individual sense of freedom for visitors to enjoy appropriate Open Space areas.
 - Assess appropriate passive recreational needs; identify attractive areas for passive recreation; inventory natural, cultural and agricultural resources; assess relative rarity of particular ecosystems; and identify data gaps.
 - Recognize budget constraints.
 - Evaluate potential limitations on activities based on objective criteria.
- 1.2** Provide high-quality, well-maintained and safe passive recreational facilities (e.g. trails, access points) and visitor services.
 - Design trails and supporting facilities with environmental preservation in mind.
 - Provide a variety of trails for different purposes.
 - Seek to connect existing trails.
 - Provide some loop trails.
 - Design trails and other visitor facilities to be accessible for people with disabilities when and where appropriate.
- 1.3** Provide access points and trailheads to Open Space that encourage visitors to use alternate modes of transportation to get to Open Space (e.g. walking, bicycling, buses).
- 1.4** Minimize conflicts between passive recreational uses by informing visitors about proper trail etiquette and reinforcing with enforcement when necessary.

Goal #2: Ensure passive recreational activities are compatible with long term preservation of natural, cultural, and agricultural resources.

Objectives

- 2.1** Enhance public education and outreach efforts to increase awareness and understanding of the natural, cultural, and agricultural values.
- Inspire visitors to appreciate nature and become stewards through education and interpretation.
 - Work with young children and local schools.
 - Expand on-the-ground education and interpretive efforts (staff, hosts, etc.).
- 2.2** Promote research and monitoring.
- 2.3** Carefully manage activities to enhance visitors' understanding of natural resources and to minimize environmental impacts.
- Inform visitors about ways to minimize environmental impacts and enforce appropriate restrictions when necessary.
 - Management should not only minimize impacts, but attempt to restore environmental values wherever possible (especially in areas that have been damaged by passive recreational use).
- 2.4** Preserve and restore higher quality natural areas by directing visitor use to appropriate areas and away from sensitive areas. Some uses or levels of visitor use may need to be limited or not allowed to protect natural values.
- Identify higher quality or sensitive natural areas through system-wide inventories and future planning efforts. Potential areas may include Habitat Conservation Areas, relatively large unfragmented areas with high natural values, wetlands and riparian areas, tallgrass communities, rare plant species, raptor habitat, and ground nesting bird habitat.

Goal #3: Partner with the community in passive recreation decision-making and stewardship efforts.

Objectives

- 3.1** Enhance public's relationship with the Open Space program.
- 3.2** Seek input and discussion in planning, decision-making, and implementation efforts.
- 3.3** Communicate Open Space activities, achievements, issues, management challenges, and messages.
- 3.4** Solicit ideas for volunteer programs and implement these programs with neighbors, visitors, and interest groups.

Management strategies

The draft goals and objectives, as listed above, will be further developed by Open Space staff to ensure they are specific, measurable, achievable, and have realistic time lines. Management strategies will be developed later in the draft Visitor Plan and used to accomplish the goals and objectives.

Management strategies must be flexible and based on the best available information. If impacts are not clearly understood, a cautious approach should be used and priority should be given to protecting natural values. A good faith effort should be made to collect additional data or information, if what exists is insufficient. An adaptive and conservative approach allows for changing circumstances, creates opportunities to incorporate new information and evaluate unanticipated activities, and minimizes the likelihood of irreversible impacts to the environment.

Public acceptance of a variety of management strategies is described in the recent Open Space phone survey. Initial management efforts will focus on those actions determined to be most effective and supported by the community. Educational efforts, such as the "Leave No Trace on Open Space" program, will be explored before more restrictive techniques are considered. The community must understand the need for management actions, support them, and be instrumental in making them work.

Indicators and standards are needed to measure the effectiveness of management techniques. Indicators are selected for monitoring key aspects of management goals. Indicators should be directly observable, relatively easy to measure, closely related to goals and objectives, sensitive to changing use conditions, and amenable to management. Standards represent points where conditions become unacceptable based on management goals. Some potential indicators are outlined below.

- Social impacts such as crowding and conflicts, indicated by the number of complaints (e.g. comment boxes in certain areas or periodic surveys), use levels at select locations monitored annually and correlated with visitor conflicts, and dog poop counts.
- Environmental impacts, indicated by the number of social trails (condition, width, erosion), number of violations in resource protection areas, existing plant and animal inventories correlated with visitor use, and specific research projects.

5.4 Criteria for evaluating passive recreational activities

In the city of Boulder Charter, passive recreation is described as one of the purposes of Open Space, and certain activities are listed as examples: hiking, photography or nature studies, and, if specifically designated, bicycling, horseback riding or fishing. However, the Charter does not provide an actual definition of passive recreation nor a comprehensive list of what activities are appropriate for Boulder's Open Space. In the past, recreational activities have been evaluated and managed on a case-by-case basis.

The Advisory Committee has developed a definition and set of criteria to determine what specific recreational uses are appropriate and to develop management strategies for managing those activities. The criteria provide a fair, consistent process to evaluate all recreational uses on city of Boulder Open Space. Both existing and future recreational activities will be evaluated using these criteria and managed appropriately.

When evaluating specific activities, potential benefits and impacts must be determined based on the best available information. If potential impacts are not clearly understood or adequate resource information is unavailable, a cautious approach will be used and priority will be given to protecting sensitive natural resources.

A flexible, adaptive approach will be used to manage passive recreational activities. This approach enables managers to incorporate new information and better meet changing needs.

The following step-by-step process has been developed to evaluate recreational activities on city of Boulder Open Space lands. The evaluation of recreational activities will occur at two levels. A "coarse level" assessment will be conducted initially to determine the general appropriateness of the activity and to identify considerations and potential management constraints. A "fine level" assessment will be completed as information becomes available for specific areas. The "fine level" assessment is specific to a given area, considers the resources, and makes site specific recommendations for the activity. A numerical rating system may be applied to the criteria during the "fine level" assessment to establish the relative appropriateness of various recreational activities.

The steps to evaluate and manage recreational activities are described below. Appendix 2 contains the complete step-by-step process to evaluate recreational activities and a sample evaluation form.

Step 1. Background research

The first step is to research and discuss the recreational activity with participants, other Open Space visitors, members of the community, other agencies, and resource specialists. That discussion will provide information about the purpose and type of activity, the specific needs of the activity, the existing codes of ethics, background information on the average participant's behavior, and to identify potential impacts that could result from these activities. This background information will be summarized and some general parameters established (e.g., occurs primarily on-trail or off-trail and with existing visitor facility and service levels).

Step 2. Identify considerations associated with the activity's compatibility with Open Space criteria

Once background information about the activity has been summarized and general parameters have been established, considerations associated with the activity's compatibility with Open Space criteria can be identified. This process provides an opportunity to objectively evaluate the appropriateness of various recreational activities and to identify areas that need to be mitigated (how, when, where, necessary visitor facilities and services). All criteria should be evaluated with the average participant and visitor in mind (recognizing that ratings may vary depending upon the personal views and values of the person rating the activity, individual participant's behavior, knowledge, and skill level participating in the activity). Considerations, assumptions, and/or site specific recommendations identified during the rating process should be noted.

A) Does the activity contain any of the following elements that are not acceptable on Open Space? If so, the activity is not appropriate for Boulder's Open Space and further evaluation is not necessary. If unsure, please continue with the next steps in the evaluation process.

- Motorized activity (except motorized wheelchairs).
- Involves collection of natural or cultural features (except by permit or license).
- Requires visitor facilities beyond designated soft-surface trails or requires a high level of services and/or equipment to safely accommodate proposed use or to minimize impacts.
- Has significant adverse impacts to natural, cultural, scientific, or agricultural values.
- Competitive sporting event.

B) If the activity does not involve any of the unacceptable activities, identify considerations associated with the activity based on the level of compatibility with Open Space criteria. Criteria that are underlined denote more weight or importance.

Compatibility with other uses

- Preserving the quality of other visitor's experiences (considering potential conflicts, crowding, visual or aesthetic concerns such as leaving materials or equipment, and how activities are organized or structured).
 - How would significant increases in activity use levels affect preserving the quality of visitor's experiences (participants and non-participants).
- Ability to yield to other visitors (considering the average capabilities, speed, and control of participants).
- Effect on adjacent public and private land uses (considering noise, trash, traffic, and parking problems that may be associated with the activity).

Potential impacts to natural, cultural, scientific, or agricultural values

- Compatibility with long term preservation of:
 - Natural values (effect on plants, water quality, wetlands, riparian areas, and potential disturbance to wildlife).
 - Activity's potential to cause additional fragmentation of plant and animal habitat (off-trail may increase habitat fragmentation).
 - Activity's potential to cause trampling of vegetation and soil erosion.
 - Cultural values (effect on historic or prehistoric resources such as artifacts or historic buildings).
 - Scientific values (effect on ability to conduct research such as tampering or other activity influences that could impact scientific values).
 - Agricultural values (effect on livestock grazing or crop production and potential hazards when visitors and cattle are in the same areas).
 - How would significant increases in activity use levels affect compatibility with preserving plants, wildlife, cultural, scientific, or agricultural values.
- Compatibility with leaving no trace (leaving physical evidence or remains which may affect natural values such as equipment placed and left or other markings such as paint or flagging).

Relationship to setting

- Activity's dependence on a natural, near natural, or agricultural setting (is an Open Space setting integral to the experience and are more appropriate settings available which can better accommodate the activity such as a developed park?).
- Activity's ability to increase peoples' appreciation of nature or understanding of Open Space purposes (e.g., educational aspects).

Facilities and services

- Compatibility with a low level of visitor facilities (e.g., soft-surface trails, small parking areas, and minimal signs needed to provide a safe, quality experience or to mitigate impacts to other visitors and natural, cultural, scientific, or agricultural values).
- Compatibility with low levels of visitor services (e.g., minimal maintenance, enforcement, monitoring, and education needed to provide a safe, quality experience or to mitigate impacts to other visitors and natural, cultural, scientific, or agricultural values?).
- Safety considerations (accident track record, past liability issues, number of emergency responses associated with an activity).

Step 3. Analyze considerations and develop potential mitigation techniques or management needs

The next step would be to analyze the considerations listed and identify areas where the activity can possibly be made more compatible. Mitigation techniques can then be explored to see how compatible the activity can reasonably be made to meet the criteria. These mitigation factors must be evaluated to determine the effectiveness of the mitigation techniques, whether they are realistic (can they reasonably and effectively be implemented and monitored given all the other staff responsibilities), and to identify what resources (staff, funding, facilities) would be needed.

Possible mitigation or management techniques must address the time, place, and conditions necessary to provide the proposed activity. Important considerations include anticipated use levels and characteristics of the activities that affect other visitors and natural values (e.g., individual participant's behavior, knowledge, and skill level; predictability of participants; where and when activities occur; the intensity and duration of use; number of participants, group size, structure of activities or how organized; and demographic information of participants).

Step 4. Decide appropriateness of the recreational activity and management strategies

The final step would be to carefully weigh the potential benefits of the activity with the potential impacts and costs/complexity required to mitigate before determining the appropriateness of the activity. This step must determine the overall benefit to the community considering the number of people benefited and/or impacted by the proposed activity. Mitigation techniques must be evaluated to determine whether these techniques can be reasonably and effectively implemented.

The costs of additional visitor facilities and services that may be required must be quantified and evaluated based on overall

departmental priorities. Although potential mitigation techniques may appear to resolve conflicts and impacts, it is easy to overlook how difficult and costly it may be to actually implement these actions.

Impacts may be direct and obvious, such as erosion of a trail, or indirect, such as reduced reproductive success of wildlife. Impacts are often incremental and cumulative. The specific impacts of one activity must be kept in perspective with existing impacts, future impacts from new activities, and increasing visitor use levels. These impacts influence the recreational experience and the quality of the natural environment. Activities that occur primarily off-trail may increase fragmentation of natural areas and should be carefully evaluated. Some Open Space areas are relatively intact, while others are already fragmented by roads, residential and commercial development, and trails.

This step would be accomplished at two levels: 1) a “coarse level” assessment to determine the general appropriateness of the activity and potential management constraints and 2) a “fine level” assessment which is specific to a given area, considers the resources, and makes site specific recommendations for the activity. The “coarse level” assessment will primarily occur during the development of the Visitor Plan, while the “fine level” assessment will occur as information becomes available. It is our goal to address most of the “fine level” assessment during the development of a system-wide Open Space plan. In areas where resource information is unavailable or incomplete, new recreational uses will not be considered until adequate resource information is available.

An interdisciplinary team of Open Space staff will make recommendations on recreational activities (based upon the process and criteria described above and considerations developed by the Advisory Committee) to the Open Space Board of Trustees. The Open Space Board of Trustees’ meetings will be noticed in the newspaper and there will be an opportunity for public comment. Based upon staff recommendations and public comments, the Open Space Board of Trustees will make a decision regarding the proposed recreational activity.

Specific recommendations concerning each recreational activity will be developed and monitored. A separate analysis of ways of providing for a high quality experience, within the confines of the needed mitigation management and location constraints, should also be conducted for those recreational activities that are determined to be appropriate for Boulder’s Open Space.

As new research and monitoring data becomes available, recommendations on specific recreational activities will be re-evaluated. Activities that have been allowed in the past may have to be limited or restricted based upon new information. Likewise, activities that may have been limited in the past may be allowed if new information becomes available that demonstrates there are no significant adverse impacts.

Commercial recreational activities

If the activity is considered appropriate for Boulder’s Open Space, then commercial uses of the

activity must be evaluated. Commercial uses must meet a higher standard for the criteria above and in addition the following criteria will be considered.

- Non-profit or for-profit activity.
- Level of benefit to community (does it address unmet or insufficiently met community needs, is it needed to safely allow an activity?).
- Number of participants and how often do they participate.
- Minimal or no promotion/advertising requirements.
- One time or on-going event.
- Expense and complexity required to allow or regulate the activity.

The final step is to determine whether the activity is appropriate as a commercial use and if so, under what circumstances is it appropriate (how, when, and where).

6. GENERAL RECOMMENDATIONS

This section of the Advisory Committee's Report describes general recommendations for staff to consider in developing the Visitor Plan. These recommendations focus on continued public involvement, flexible adaptive management, establishing a code of ethics with various user groups, recommendations on specific activities and commercial recreational activities.

6.1 Continued public involvement

Boulder's Open Space has been and will continue to be a direct result of citizen involvement. Continued citizen involvement and stewardship efforts will assure that Boulder's Open Space remains a special place for current and future generations.

The community has provided valuable input on the topics discussed in this report and should be encouraged to review the proposed policies in the draft Visitor Plan. Citizen involvement and support are also necessary to help implement the Visitor Plan.

When evaluating specific recreational activities in the draft Visitor Plan, the Advisory Committee recommends that staff conduct additional research and discuss the activity with participants, Open Space visitors, and members of the community, as well as with other agencies and resource specialists. The community and specific user groups should continue to be consulted to better understand citizens' desires and to encourage them to invest in decision making.

Volunteers should be fully used to augment staff and financial resources, to become stewards, and to enhance understanding and appreciation of Open Space values.

6.2 Flexible adaptive management

This report describes several approaches to managing passive recreation on Open Space lands. Open Space staff should adopt flexible approaches to implement the Visitor Plan. A flexible approach assumes that the following critical factors will undergo change over time: the number of passive recreational users will increase and the types of recreational pursuits and equipment that become available in the marketplace will continue to expand, producing experimentation in various Open Space parcels by enthusiasts and raising questions about appropriateness of each particular new or modified activity. Further, natural, cultural, and agricultural resources will not remain static on various parcels and their conservation will require management flexibility to address new discoveries and changes in circumstances.

6.3 Establishing a code of ethics with various user groups

The Advisory Committee recommends that Open Space staff work with individual users groups to establish a Code of Ethics, Standards of Conduct, or some similar guide with which to establish acceptable behavior by Open Space visitors. Under this proposal, staff would work directly with each specific, organized user group with the intent of writing an acceptable behavior agreement, incorporating the agreement into a Memorandum of Understanding (MOU), and then have the MOU reviewed by the Open Space Board of Trustees (including public review and comment). The MOU could be officially adopted verbatim by the parties, or by reference, as appropriate, and possibly appended to the Visitor Plan.

Obviously, this requires additional work by staff and user groups, but there may be ways to efficiently get the job done. Many user groups already have a Code of Ethics, usually established by national umbrella organizations. These existing standards could be the starting point of discussions, with revisions added as necessary to address unique, local circumstances. Also, staff could roll this task into a stakeholder outreach and education program, thus avoiding having to conduct additional meetings with user groups. These organizations could appoint committees to do most of the work, and most information exchange and editing could take place by e-mail. In order to not hold up the current Visitor Plan process, establishing the Code of Ethics could be a future staff work task to be completed once the overall Visitor Plan is adopted.

Although this proposal would require a substantial amount of time to accomplish, the potential benefits include the enhanced ability to:

1. Create a reasonably precise expectation of what the acceptable range of behavior by visitors is, and is not;
2. Establish more definitive standards to evaluate and apply the passive recreation criteria, and to evaluate the overall success of the Visitor Plan;
3. Reduce the burden on staff to unilaterally establish what represents acceptable behavior;
4. Have user groups effectively use peer pressure and be "self-policing;"
5. Determine when education is not adequate and enforcement or other, more direct, management strategies are necessary;
6. Encourage user groups to balance advocacy with accountability and responsibility;
7. Encourage user groups to take a leadership role in establishing a code of ethics; and
8. Incorporate existing user group education programs and efforts to reduce the burden of Open Space staff.

The Advisory Committee encourages Open Space staff to actively reach out to various user groups and expand these type of collaborative efforts. The term "user group" includes environmental organizations as well as recreational groups.

6.4 Recommendations on specific activities

Evaluation and management of recreational activities on Open Space should be based on the most recent environmental and safety information. Where adequate information is not available, a reasonable effort should be made to research the subject to clarify problems and solutions.

During the Advisory Committee's "coarse level" assessment, several recreational activities have emerged as not being compatible with Open Space criteria. The initial recreational activities that the Advisory Committee feels are clearly not compatible with Open Space criteria include competitive sporting events and paint ball activities because they have the potential to cause significant impacts to other visitors and natural, cultural, scientific, or agricultural values. Other recreational activities may also not be compatible with Open Space criteria.

Hang gliding, paragliding, model glider flying, all terrain skates and mountain boards should be restricted to specific designated areas, if allowed on Open Space lands. Other recreational activities may also need to be restricted to specific designated areas.

Although the Advisory Committee has not had an opportunity to thoroughly research each recreational activity, they have identified initial considerations associated with various activities.

Appendix 3 contains the initial considerations identified by the Advisory Committee for current recreational activities. These initial considerations do not necessarily represent the views of the entire Advisory Committee nor Open Space staff. Additional considerations will be identified and evaluated as the "fine level" assessment is conducted for specific areas of Open Space. Legal risks pertaining to user safety will also be considered before making decisions about appropriateness of multiple uses in particular areas.

6.5 Recommendations on commercial recreational activities

Currently only commercial horse livery is regulated on city of Boulder Open Space. Numerous other commercial recreational activities occur and primarily involve instruction of outdoor activities and commercial filming. Commercial uses can increase the number of participants often resulting in additional impacts to other visitors and natural, cultural, scientific, or agricultural values of Open Space. Although increased impacts are likely, instruction of recreational participants, whether commercial or not, could help increase the level of the participants' education and awareness of environmental and social concerns and improve their understanding of trail etiquette. Commercial livery provides opportunities for people who don't own horses to participate in this activity.

The Advisory Committee recommends that appropriate commercial recreational activities be

allowed only on a permit basis. Permitting these commercial uses allows these activities to be designated to appropriate areas and allows reasonable limits to be set on the total number of participants (annual participants and/or participants out at one time).

Permit holders should be required to incorporate educational programs on Open Space etiquette, both on and off-trail, and reducing environmental impacts into their programs. Fees will be collected to cover costs associated with administering permits, monitoring, additional services and/or facilities that may be required, and to improve educational programs related to the activity. All permits should be administered on an annual or seasonal basis and allow flexibility to be revised or eliminated based on impacts and monitoring information.

Additional considerations associated with commercial uses include:

- Commercial uses should meet a higher level of compatibility with Open Space criteria.
- Commercial uses should not affect other visitors' use of an area (no exclusive use).
- No significant adverse impacts should be allowed and participants must be taught low impact techniques.

Permits should be consistent with other city policies and regulations. The Advisory Committee acknowledges that Open Space and Mountain Parks will be working on a joint policy to permit commercial use. The permit system for commercial recreational activities should be reasonable (fees, administrative procedures, limits on group sizes, restrictions) to promote coordination and cooperation between the agency and commercial operators. Rates for permits may vary depending on profit versus non-profit status. In all cases of commercial use, advertising should be minimal and local in extent.

Specific considerations associated with various commercial recreational activities are described in Appendix 3 and should be further evaluated by Open Space staff when developing specific permit provisions for each commercial passive recreational activity.

REPORT CONTRIBUTORS

Open Space Visitor Plan Advisory Committee Members

Cathy Bickell, Bruce Bland, Suzanne Bohan, Mike Figgs, Jen Lamb, Larry MacDonnell, Suzanne O'Neill, Charlie Rollins, Ricky Weiser, Scott Westfall, and Brent Wheeler. Chris Beh participated as an Advisory Committee member from June until September.

Other Open Space Visitor Plan Advisory Committee Report Contributors

Many Open Space staff members, the Open Space Board of Trustees, surrounding agencies, consultants, and members of the public were involved in completing this report.

Open Space Board of Trustees members

Larry MacDonnell, Crystal Gray, Suzanne Bohan, Chris Mueller, and Linda Andes-Georges.

Hundreds of Open Space visitors and citizens contributed comments and ideas on the Visitor Plan at three public workshops, Advisory Committee meetings, Open Space Board of Trustees meetings, and through various outreach opportunities.

APPENDIX 1: CITY OF BOULDER CHARTER

The management of Open Space lands is guided by the city Charter, as approved by the city of Boulder voters in 1986. Open Space land shall be acquired, maintained, preserved, retained, and used only for the following purposes:

- Preservation or restoration of natural areas characterized by or including terrain, geologic formations, flora, or fauna that is unusual, spectacular, historically important, scientifically valuable, or unique, or that represent outstanding or rare examples of native species;
- Preservation of water resources in their natural or traditional state, scenic areas or vistas, wildlife habitats, or fragile ecosystems;
- Preservation of land for passive recreation use, such as hiking, photography or nature study, and if specifically designated, bicycling, horseback riding, or fishing;
- Preservation of agricultural uses and land suitable for agricultural production;
- Utilization of land for shaping the development of the city, limiting urban sprawl and disciplining growth;
- Utilization of non-urban land for spatial definition of urban areas;
- Utilization of land to prevent encroachment on floodplains; and
- Preservation of land for its aesthetic or passive recreational value and its contribution to the quality of life of the community.

APPENDIX 2: STEPS AND SAMPLE FORM TO EVALUATE RECREATIONAL ACTIVITIES

The steps to evaluate and manage recreational activities are described below.

Step 1. Background research

The first step is to research and discuss the recreational activity with participants, other Open Space visitors, members of the community, other agencies, and resource specialists. That discussion will provide information about the purpose and type of activity, the specific needs of the activity, the existing codes of ethics, background information on the average participant's behavior, and to identify potential impacts that could result from these activities. This background information will be summarized and some general parameters established (e.g., occurs primarily on-trail or off-trail and with existing visitor facility and service levels).

Step 2. Identify considerations associated with the activity's compatibility with Open Space criteria

Once background information about the activity has been summarized and general parameters have been established, considerations associated with the activity's compatibility with Open Space criteria can be identified. This process provides an opportunity to objectively evaluate the appropriateness of various recreational activities and to identify areas that need to be mitigated (how, when, where, necessary visitor facilities and services). All criteria should be evaluated with the average participant and visitor in mind (recognizing that ratings may vary depending upon the personal views and values of the person rating the activity, individual participant's behavior, knowledge, and skill level participating in the activity). Considerations, assumptions, and/or site specific recommendations identified during the rating process should be noted. Below is a sample evaluation form:

Does the activity contain any of the following elements that are not acceptable on Open Space? If so, the activity is not appropriate for Boulder's Open Space and further evaluation is not necessary. If unsure, please continue with the next steps in the evaluation process.

a) Motorized activity (except motorized wheelchairs).
b) Involves collection of natural or cultural features (except by permit or license).
c) Requires visitor facilities beyond designated soft-surface trails or requires a high level of services and/or equipment to safely accommodate proposed use or to minimize impacts.

d) Has significant adverse impacts to natural, cultural, scientific, or agricultural values.
e) Competitive sporting event.

If the activity does not involve any of the unacceptable activities, identify considerations associated with the activity based on the level of compatibility with Open Space criteria. Criteria that are underlined denote more weight or importance. Determine whether the activity has any considerations associated with the criteria by marking either: consideration (C), no consideration (NC), or unknown (U) in the right column. Make note of considerations or assumptions that are identified in the blank space provided below each criteria.

Criteria	Rating: C, NC, or U
I. Compatibility with other uses	
f) <u>Compatibility with preserving the quality of other visitor's experiences</u> (considering potential conflicts, crowding, visual or aesthetic concerns such as leaving materials or equipment, and how activities are organized or structured).	
Considerations or assumptions:	
g) How would significant increases in activity use levels effect preserving the quality of visitor's experiences (participants and non-participants).	
Considerations or assumptions:	
h) <u>Activity's ability to yield to other visitors</u> (considering the average capabilities, speed, and control of participants).	

Criteria	Rating: C, NC, or U
Considerations or assumptions:	
i) Effect on adjacent public and private land uses (considering noise, trash, traffic, and parking problems that may be associated with the activity).	
Considerations or assumptions:	
II. Potential impacts to natural, cultural, scientific, or agricultural values	
<u>Compatibility with long term preservation of:</u>	
j) <u>Natural values</u> (effect on plants, water quality, wetlands, riparian areas, and potential disturbance to wildlife).	
k) <u>Cultural values</u> (effect on historic or prehistoric resources such as artifacts or historic buildings).	
l) <u>Scientific values</u> (effect on ability to conduct research such as tampering or other activity influences that could impact scientific values).	
m) <u>Agricultural values</u> (effect on livestock grazing or crop production).	
Considerations or assumptions:	
n) <u>Activity's potential to cause additional fragmentation of plant and animal habitat</u> (off-trail may increase habitat fragmentation).	

Criteria	Rating: C, NC, or U
Considerations or assumptions:	
o) Activity's potential to cause trampling of vegetation and soil erosion.	
Considerations or assumptions:	
p) Compatibility with leaving no trace (leaving physical evidence or remains which may affect natural values such as equipment placed and left or other markings such as paint or flagging).	
Considerations or assumptions:	
q) How would significant increases in activity use levels effect compatibility with preserving plants, wildlife, cultural, scientific or agricultural values.	
Considerations or assumptions:	
III. Relationship to setting	

Open Space Visitor Plan Advisory Committee Report

Criteria	Rating: C, NC, or U
r) Activity's dependence on a natural, near natural, or agricultural setting (is an Open Space setting integral to the experience and are more appropriate settings available which can better accommodate the activity such as a developed park?).	
Considerations or assumptions:	
s) Activity's ability to increase peoples' appreciation of nature or understanding of Open Space purposes (e.g., educational aspects).	
Considerations or assumptions:	
IV. Facilities and services	
t) <u>Compatibility with a low level of visitor facilities</u> (e.g., soft-surface trails, small parking areas, and minimal signs needed to provide a safe, quality experience or to mitigate impacts to other visitors and natural, cultural, scientific, or agricultural values).	
Considerations or assumptions:	
u) Compatibility with low levels of visitor services (e.g., minimal	

Criteria	Rating: C, NC, or U
maintenance, enforcement, monitoring, and education needed to provide a safe, quality experience or to mitigate impacts to other visitors and natural, cultural, scientific, or agricultural values?).	
Considerations or assumptions:	
v) Compatibility with providing a safe recreational experience (considering accident track record, past liability issues, number of emergency responses associated with an activity).	
Considerations or assumptions:	

Step 3. Analyze considerations and develop potential mitigation techniques or management needs

The next step would be to analyze the considerations listed and identify areas where the activity can possibly be made more compatible. Mitigation techniques can then be explored to see how compatible the activity can reasonably be made to meet the criteria. These mitigation factors must be evaluated to determine the effectiveness of the mitigation techniques, whether they are realistic (can they reasonably and effectively be implemented and monitored given all the other staff responsibilities), and to identify what resources (staff, funding, facilities) would be needed.

Possible mitigation or management techniques must address the time, place, and conditions

necessary to provide the proposed activity. Important considerations include anticipated use levels and characteristics of the activities that affect other visitors and natural values (e.g., individual participant's behavior, knowledge, and skill level; predictability of participants; where and when activities occur; the intensity and duration of use; number of participants, group size, structure of activities or how organized; and demographic information of participants).

Areas where activity may be made more compatible	Possible mitigation techniques or management needed	Costs and resources needed to implement mitigation

Step 4. Decide appropriateness of the recreational activity and management strategies

The final step would be to carefully weigh the potential benefits of the activity with the potential impacts and costs/complexity required to mitigate before determining the appropriateness of the activity. This step must determine the overall benefit to the community considering the number of people benefited and/or impacted by the proposed activity. Mitigation techniques must be evaluated to determine whether these techniques can be reasonably and effectively implemented.

The costs of additional visitor facilities and services that may be required must be quantified and evaluated based on overall departmental priorities. Although potential mitigation techniques

may appear to resolve conflicts and impacts, it is easy to overlook how difficult and costly it may be to actually implement these actions.

Impacts may be direct and obvious, such as erosion of a trail, or indirect, such as reduced reproductive success of wildlife. Impacts are often incremental and cumulative. The specific impacts of one activity must be kept in perspective with existing impacts, future impacts from new activities, and increasing visitor use levels. These impacts influence the recreational experience and the quality of the natural environment. Activities that occur primarily off-trail may increase fragmentation of natural areas and should be carefully evaluated. Some Open Space areas are relatively intact, while others are already fragmented by roads, residential and commercial development, and trails.

This step would be accomplished at two levels: 1) a “coarse level” assessment to determine the general appropriateness of the activity and potential management constraints and 2) a “fine level” assessment which is specific to a given area, considers the resources, and makes site specific recommendations for the activity. The coarse level assessment will primarily occur during the development of the Visitor Plan, while the fine level assessment will occur as information becomes available. It is our goal to address most of the fine level assessment during the development of a system-wide Open Space plan. In areas where resource information is unavailable or incomplete, new recreational uses will not be considered until adequate resource information is available.

An interdisciplinary team of Open Space staff will make recommendations on recreational activities (based upon the process and criteria described above and considerations developed by the Advisory Committee) to the Open Space Board of Trustees. The Open Space Board of Trustees’ meetings will be noticed in the newspaper and there will be an opportunity for public comment. Based upon staff recommendations and public comments, the Open Space Board of Trustees will make a decision regarding the proposed recreational activity.

Specific recommendations concerning each recreational activity will be developed and monitored. A separate analysis of ways of providing for a high quality experience, within the confines of the needed mitigation management and location constraints, should also be conducted for those recreational activities that are determined to be appropriate for Boulder’s Open Space.

As new research and monitoring data becomes available, recommendations on specific recreational activities will be re-evaluated. Activities that have been allowed in the past may have to be limited or restricted based upon new information. Likewise, activities that may have been limited in the past may be allowed if new information becomes available that demonstrates there are no significant adverse impacts.

Commercial recreational activities

Open Space Visitor Plan Advisory Committee Report

If the activity is considered appropriate for Boulder's Open Space, then commercial uses of the activity must be evaluated. Commercial uses must meet a higher standard for the criteria above and in addition the following criteria will be considered.

Non-profit or for-profit activity.
Level of benefit to community (does it address unmet community needs, is it needed to safely allow an activity).
Number of participants and how often do they participate.
Minimal or no promotion/advertising requirements.
One time or on-going event.
Expense and complexity required to allow or regulate the activity.

Is the activity appropriate as a commercial use? If the activity is appropriate as a commercial use, under what circumstances is it appropriate (how, when, and where)?

APPENDIX 3: INITIAL CONSIDERATIONS TO EVALUATE WHEN DEVELOPING RECOMMENDATIONS ON RECREATIONAL ACTIVITIES

The Advisory Committee has developed a set of criteria and process to evaluate recreational activities and established a list of existing recreational activities that need to be evaluated. The Advisory Committee has used this process to identify some initial considerations associated with each recreational activity. Please refer to the sample evaluation form in Appendix 2 for details on the Open Space criteria used to develop these considerations.

The considerations described below are an initial list generated by various members of the Advisory Committee and do not necessarily represent the views of the entire Advisory Committee or Open Space staff. These considerations were developed based on general Open Space conditions and normal participants' behavior. It is important to recognize there are many variables which can influence these considerations and an activity's compatibility with Open Space. Some variables include weather, site specific information, changing conditions, lack of research on the activity, etc. These considerations will be further analyzed by Open Space staff and used to develop recommendations concerning each recreational activity in the upcoming Visitor Plan.

Benefits of recreational activities

Passive recreational activities enhance many visitors' understanding of the natural environment and create community support for Open Space. Potential benefits of the activity must be carefully weighed with the potential impacts and costs/complexity required to mitigate before determining the appropriateness of the activity. This step must determine the overall benefit to the community considering the number of people benefited and/or impacted by the proposed activity.

Boulder citizens appreciate the opportunities provided by Open Space lands to get outside to enjoy the beauty of their surroundings and to spend special time - alone or with friends, to "recharge their batteries." The following benefits are common to all recreational activities: enhance overall quality of life, provide close by opportunities which minimize the need to travel to other areas, opportunity to enjoy outdoors, enhance understanding and appreciation of the natural environment, encourage participants to volunteer for clean-up and related projects, and benefit the local economy. In order to minimize repetition, only unique characteristics of each specific recreational activity are described on the following initial considerations.

Activities identified in the Charter

Nature study: specific activities considered

include bird watching, botany, tracking, and amateur archaeology

Must meet criteria

- Any form of this activity that requires collecting of natural or cultural features should be required to obtain a permit.

Compatibility with other uses

- Generally speaking, small groups (1 to 4) are compatible with preserving the quality of other visitor's experiences. Large groups (15 or more) could cause crowding, participants could block trails while viewing, and fill up parking spaces.
- Individuals or groups could wander onto adjacent private lands and cause impacts to private landowners.

Potential impacts to natural, cultural, scientific, or agricultural values

- Nature study helps us to understand the landscape and biodiversity and contributes to an understanding and appreciation of nature.
- The act of studying could have impacts to natural, cultural, scientific, and/or agricultural values. Most users have little impact, but random collecting of cultural artifacts and rare plants is a big issue. User groups (e.g., Audubon, Boulder County Nature Association, Colorado Archaeological Society) need to take a lead on peer pressure efforts. The desire to know and find elements of biodiversity and cultural resources is healthy and needs to be channeled into constructive uses (e.g., research efforts).
- Impacts vary significantly depending on how much off-trail use occurs. Reoccurring use may create social trails.
- Formal study plots require pins or flagging that could affect other visitors and natural, cultural, scientific, and/or agricultural values.

Relationship to setting

- There is a strong relationship to a natural, near natural, or agricultural setting and most participants are looking for something specific to this type of setting. This close relationship leads to a strong connection to the landscape.

Facilities and services

- These activities don't require much in terms of visitor facilities, but large groups require

- adequate parking spaces.
- Large organized groups should have their own liability insurance.

Potential mitigation techniques and staff resources needed

- Large group impacts could be mitigated by requiring permits and insurance.
- Large group and off-trail use impacts could be addressed by education and outreach to user groups (establishing and strongly encouraging appropriate code of ethics), and peer pressure.
- Intensive or formal study sites could be mitigated by requiring permits and developing study requirements and report guidelines. Staff could identify information needs and encourage activities which meet these needs.
- Staff would be required to administer permits, conduct education and outreach efforts, and to enforce flagrant violations.

Benefits of activity

- Provides individuals and families close by opportunities to learn and appreciate natural environment.

Commercial uses

- Require permits and insurance.
- Limit group size, require education, and review business plan.

Hiking

Compatibility with other uses

- Very compatible with other visitors and very little conflict occurs (even though hiking is the most common activity on Open Space).
- Legal right of ways are necessary for hiking on adjacent private lands.

Potential impacts to natural, cultural, scientific, or agricultural values

- Off-trail damage is the primary concern and could result in damage to sensitive plants and wildlife, agricultural plantings on leased pasture, and disturbance to cultural resource sites. Large number of users could increase impact levels.

Relationship to setting

- An Open Space setting is integral to this activity.

Facilities and services

- Trails, trailheads, and signs are needed.

- Staff are needed to construct and maintain facilities, educate visitors, and enforce regulations.
- Could be safety concerns associated with visitors and cattle when these uses occur in the same areas (especially small children during calving season or when bulls are present).

Potential mitigation techniques and staff resources needed

- Hikers should be strongly encouraged to stay on trails or may need to be required to stay on trails in environmental sensitive areas. Impacts could be minimized through more comprehensive education programs.
- Trails should not be located in sensitive or critical habitats.
- Seasonal restrictions could be used to minimize conflicts with agricultural uses (calving season, periods of intense agricultural equipment use, bulls).

Benefits of activity

- Close by opportunities for the most popular Open Space passive recreational activity.

Photography

Compatibility with other uses

- Generally speaking, small groups (1 to 4) are compatible with preserving the quality of other visitor's experiences. Large groups (15 or more) could cause crowding, participants could block trails while viewing, and fill up parking spaces.

Potential impacts to natural, cultural, scientific, or agricultural values

- Photography may help us to understand the landscape and biodiversity and contributes to an understanding and appreciation of nature. Sometimes involves off-trail use (though usually only at very low levels of use). Impacts vary significantly depending on how much off-trail use occurs. Reoccurring use may create social trails and impact plants and animals.
- Access to closed or restricted areas could pose problems.

Relationship to setting

- There is a strong relationship to an Open Space setting and most participants are looking for something specific to this type of setting. This close relationship leads to a strong connection to the landscape.

Facilities and services

- Trails and trailheads are needed to provide reasonable access, but no special facilities or services required.

Potential mitigation techniques and staff resources needed

- Large group impacts could be mitigated by requiring permits and insurance.
- Large group and off-trail use impacts could be addressed by education and outreach to user groups (establishing and strongly encouraging appropriate code of ethics), and peer pressure.
- Staff would be required to administer permits, conduct education and outreach efforts, and to enforce flagrant violations. Large group activity may need to be permitted.
- Since the activity may involve off-trail activity, access restrictions may be necessary in certain locations to protect sensitive habitat or species.

Commercial uses

- Could create a disturbance if used by large groups or for filming motion pictures. Commercial filming should be by permit only and for a fee.
- There should be no exclusive use of an area.

Activities identified in the Charter, but only where designated

Mountain biking

Compatibility with other uses

- Could result in conflicts with slower speed, on foot use (based on citizen input from phone survey) particularly on steep, narrow trails.
- Steepness of the trail could influence compatibility with other uses.

Potential impacts to natural, cultural, scientific, or agricultural values

- Seasonal closures should be considered to avoid use of trails when wet.
- Provide education to encourage participants to ride down the middle of the trail (which would minimize environmental impacts).

Relationship to setting

- Bicycling can occur along roads and concrete trails, but an Open Space setting is preferred by most participants (safer than roads and more scenic). Many will not participate in the activity if confined to roads and concrete trails.

Facilities and services

- Adequate trail maintenance is required and wider trails or trails with periodic opportunities to pull or step to the side would allow bicyclists to pass other visitors easily.

- Trailhead information services would be helpful.

Potential mitigation techniques and staff resources needed

- High use areas could be managed by alternating days of use and/or establishing one direction travel (if loop trail). Significant increases in participation might warrant more comprehensive education efforts or restrictions to ensure continued compatibility with other visitors.
- Wet conditions on trails and potential impacts that could result could be addressed with seasonal closures.
- Possibly allow only on wider, flatter trails or trails with periodic opportunities to pull or step to the side allowing bicyclists to pass other visitors easily and minimize conflicts (particularly in high use areas such as trailheads).
- Possibly design trails with curves and natural features to reduce speed of bicyclists.
- Effects on wildlife could be reduced with seasonal closures.
- Cumulative impacts could be minimized by offering “connector corridors” that dissipate use over larger, existing trail systems (although this could increase environmental impact).

Benefits of activity

- Provides a safe and aesthetically pleasing setting to enjoy the outdoors and an opportunity to exercise.

Commercial uses

- Instruction of cyclists, whether commercial or not, could help increase the level of the riders’ education and awareness of environmental and social concerns and improve their understanding of trail etiquette.
- A permit system could be developed to control group size, location of activity, and its nature.

Fishing - also see water related considerations
--

Must meet criteria

- This activity could result in collecting fish and a permit would be necessary (state fishing license).

Compatibility with other uses

- Anglers use riparian edges of streams and lakes which could pose a safety concern.
- Trash is often left behind which detracts from other visitors’ experiences and could pose safety concerns (hooks, tangled fishing line).

Potential impacts to natural, cultural, scientific, or agricultural values

- This activity could result in impacts to fish populations (both native and non-native) and could have an effect on riparian vegetation.
- Could disrupt wildlife which rely on areas used for fishing (for water, food, and shelter).
- Trash is often left behind which could harm wildlife (hooks, tangled fishing line).
- This activity primarily occurs off-trail and could fragment plant and animal habitat.

Relationship to setting

- Fishing is closely related to an Open Space setting and it could increase peoples' appreciation and understanding of the natural environment.

Facilities and services

- Additional visitor facilities may be needed to manage stream-side / lake-side effects.
- Visitor services would be needed to enforce state catch limits and other restrictions.

Potential mitigation techniques and staff resources needed

- Could impose catch and release limits.
- Could designate fishing activities to select locations. Considerations for designating fishing areas include access and parking, native fisheries restoration potential, potential escape of non-native fish into other water ways, and impacts to riparian vegetation. For example, the east side of Wonderland Lake is a dam and angler use would not harm riparian lands. Access is already good and no special facilities would be required.
- There is a slight hazard (but probably acceptable) from fishing hooks colliding with other visitors. In high use areas, other visitor activities could be separated to avoid this hazard.
- Stocking should be carefully evaluated and should not conflict with native fisheries or long term restoration efforts.

Benefits of activity

- Provides opportunities for families to get out and enjoy nature.

Commercial uses

- Possibility of fishing instruction classes.

Horseback riding

Compatibility with other uses

- Horse can be unpredictable and could cause conflicts on high use multi-purpose trails (particularly bike trails).

- Equestrians are generally polite and considerate of other visitors.
- The possibility of increasing use levels from the Boulder area is unlikely, but increases could occur from other areas like Jefferson County.
- Existing trail ethics require all other users to yield to horses because of the animal's unpredictability.
- Impacts to other visitors could be greater with large trail rides (commercial) versus small, individual users.
- Horse manure may disturb other visitors, but it dries fast and decomposes quickly.

Potential impacts to natural, cultural, scientific, or agricultural values

- Off-trail use could cause vegetation trampling (similar to cattle) and could result in formation of social trails if reoccurring off-trail use.
- Some wildlife seem to be less disturbed by visitors on horses.

Relationship to setting

- Very dependent upon an Open Space setting.

Facilities and services

- Horseback riding occurs on and off of designated trails. Horses can cause more wear on trails and may require more maintenance (especially during or after rain).
- Larger parking lots for horse trailer parking would improve equestrian access (especially during busy weekends), but is not essential.
- Gates create obstacles for equestrians, should be minimized whenever possible, and should be easy for equestrians to open and close.
- Some incidences of horses running away and injuring people.

Potential mitigation techniques and staff resources needed

- Education and outreach to Boulder County Horseman's Association and other equestrians could help alleviate concerns.
- Consider opening agricultural corrals adjacent to parking areas (Flatirons Vista) for more horse trailer parking when these areas are not in agricultural use.
- Damage resulting from use during wet and muddy trail conditions could be addressed through increased educational efforts.
- Potentially channel use to certain areas and restricting use in some areas.
- Signs should clearly inform visitors of potential trail uses to increase awareness and minimize conflicts.

Benefits of activity

- Preservation of western culture, provides a safe and aesthetically pleasing setting to enjoy the outdoors, may enhance other visitors experiences as an opportunity to see a

horse, and allows people with special disabilities to access and enjoy Open Space.

Commercial uses

- Commercial livery operations provide riding opportunities for people who don't own horses.
- Could continue current policies (require permits to control group size, location of activity, and its nature). Education efforts should be required and fees should be reasonable.
- Instruction of equestrians, whether commercial or not, could help increase the level of the riders' education and awareness of environmental and social concerns and improve their understanding of trail etiquette.

Activities not identified in the Charter

Dog walking

Compatibility with other uses

- Compatibility with other Open Space uses depends on individual tolerance of other user groups. Many visitors have had negative encounters with dogs (some bitten or nearly bitten). Other visitors enjoy having pets on Open Space.
- Dog walkers have a low compliance rate with rules, regulations, and ethics.
- Could pose conflicts and safety concerns (especially for young children, seniors, and other small dogs).
- Unremoved dog excrement remains for long periods and is significant concern for other visitors.
- Depending on compliance with existing dog regulations, it may be difficult for dog walkers to yield to other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Depending on compliance with existing dog regulations, potential impacts will vary. Low compliance presents a major problem for wildlife. Dog excrement is sometimes left behind and could affect natural values (fertilizer for weeds which tend to favor disturbed areas along trail edges; dog feces and urine leaves a scent behind that some wildlife can smell causing them to avoid areas because of predation).
- Uncontrolled dogs could harass wildlife and livestock.
- If dogs stay within the trail corridor, little additional fragmentation occurs. Dogs straying away from trail corridors could significantly increase disturbance to wildlife.

Relationship to setting

- A natural setting is not essential and could be provided in a developed park setting, but many participants prefer an Open Space setting.

Facilities and services

- Dog excrement bags and trash cans are helpful at trailheads.
- Need increased education and enforcement services. Considerable monitoring / education / enforcement is required due to numerous types of uses and low compliance with regulations.
- Few injuries and emergency response associated with type of activity, but safety issue is emphasized by those fearful of dogs. Could be safety concerns associated with visitors and their pets when these uses occur in the same areas as agricultural activities (especially during calving season, periods of intense use of agricultural equipment, or when bulls are present).

Potential mitigation techniques and staff resources needed

- Dog excrement bags and trash cans are needed at trailheads.
- Need increased education, enforcement, and monitoring services.
- Could change regulations to be more restrictive if compliance does not improve.
- Dog parks could be created and off-leash use could be restricted to these areas.
- Could require testing and a highly visible permit for all off-leash dogs and their owners. Rangers could do periodic spot checks to insure compliance.
- Seasonal restrictions could be used to minimize conflicts with agricultural uses (calving season, periods of intense agricultural equipment use).

Benefits of activity

- Many Open Space visitors enjoy walking their pets and these visitors are typically very frequent users.

Commercial uses

- Dog trainers frequently use Open Space areas and could be permitted. Large groups of dogs could increase overall impacts.

Jogging

Compatibility with other uses

- Slow moving traffic (especially elderly and very young visitors) could be impacted by joggers passing by at high speed over and over again (especially on narrow trails).
- Joggers can slow up and yield to others, but may not do it consistently.

Potential impacts to natural, cultural, scientific, or agricultural values

- Icy or muddy trails often result in joggers going off-trail resulting in trampled vegetation along the edge of the trail and trail widening.
- Wildlife may not want to use or cross heavily used trails.

Relationship to setting

- Jogging can be done almost anywhere, but it is more enjoyable in an Open Space setting. Serious joggers appreciate the varied terrain of Open Space trails.

Facilities and services

- Some education and signs may be necessary to lessen impacts on slower moving visitors and trail widening when trails are wet or icy.
- Due to higher speeds, there is a greater risk of tripping or twisting ankles on rocky or uneven surfaces which may require emergency services.

Potential mitigation techniques and staff resources needed

- Potential impacts to other visitors could be alleviated by establishing an ethic among joggers to slow down when passing other visitors, and encouraging runners to use wider trails and/or trails with low numbers of slow speed users. This can probably be accomplished through an educational effort since most joggers live nearby and are regular Open Space visitors.
- If use levels by joggers increase significantly and result in increased complaints, then some popular trails may need to be closed to joggers, especially during high use time (e.g., weekends).
- Trail widening and vegetation trampling is a common problem. Educational efforts (such as “get muddy” signs) probably will not be effective because muddy jogging shoes or icy trails can cause falls and related injuries. In addition, muddy shoes are heavy and uncomfortable when jogging. Other options to improve these problems would be to fix sections of trail that are prone to ice and mud with crusher fines, large flat rocks, or trail relocation. If problems continue to become serious, it may be necessary to close some trails to jogging on a seasonal basis.
- Other concerns: high use levels could disrupt wildlife in some areas at some times. Temporary closures or rerouting of trails may help if this becomes a serious problem. Off-trail jogging should not be allowed anywhere because of impacts to vegetation and wildlife, and the increased risks caused by rocks, cactus, and other off-trail hazards.
- Organized competitive running events should not be allowed as this will involve many runners and result in impacts to other visitors and on natural plants and animals. Also there are many other more suitable locations available for this type of activity.
- A variety of distances and terrain should be provided to accommodate a wide variety of skill levels. Subject to the concerns mentioned above, as many trails as possible should

be open to jogging. Smoother, drier, ice-free surfaces are desirable.

Benefits of activity

- Very popular passive recreational activity which provides an opportunity to exercise in an Open Space setting.

Commercial uses

- Running clinics could be allowed if the number of participants is limited to small groups (perhaps 12 or so), the number of runs is relatively few (perhaps one run per week for 8 weeks), and the jogging occurs in an appropriate place and time that will not bother other visitors or result in trail widening. All participants should be instructed in minimizing impacts.
- Individual instruction (tutoring) of a student or two by experienced runners may not need to be regulated. However, instructors should be permitted so that they can be told to inform their students of the impacts of jogging and how to minimize them.

Picnicking

Compatibility with other uses

- Generally very compatible with other uses, but more trash is generated from this type of activity which could impact other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Off-trail use could result in trampling of vegetation and disturbance to wildlife. Off-trail use is sometimes desired, but usually only occurs at low levels.
- The use of camp fires or stoves may pose a threat of wildfire.

Relationship to setting

- Can be done in a developed park setting, but many prefer an Open Space setting.

Facilities and services

- Picnic tables are preferred by some visitors, but are not essential.
- Trash generated from picnicking may require trash cans and higher service levels.
- Picnicking may increase the need for restroom facilities and associated maintenance needs.

Potential mitigation techniques and staff resources needed

- Developed picnic areas (with tables, benches, and trash cans) could be located in easily accessible and pleasant locations.
- Stress leave no trace in education efforts.

- The use of camp fires or stoves could be prohibited to minimize any threat of a wildfire.

Benefits of activity

- Provides nearby opportunities for families to enjoy Open Space.

Commercial uses

- Catering groups sometimes request use of certain areas for large events and these type of uses could be permitted if facilities are adequate for the proposed event.

Sledding

Compatibility with other uses

- Could be conflicts and safety issues if sledding occurs near trails or roads.

Potential impacts to natural, cultural, scientific, or agricultural values

- Primarily an off-trail activity and could impact sensitive plants (particularly when snow cover is thin) and wildlife. Impacts are limited by the low number of days per year that sledding occurs (because of inadequate snow).

Relationship to setting

- Snow covered hills are essential, but activity could occur in developed parks.

Facilities and services

- Monitoring and repair of damage may be needed.
- Additional signs and staff may be needed to designate appropriate areas.
- Parking and access gates could be an issue if use develops in areas without these facilities.

Potential mitigation techniques and staff resources needed

- Could prohibit on hills where safety and/or environmental sensitivity are issues, but only if sledding is anticipated or actually occurs.
- Activity levels could increase significantly and designated sledding locations should not be visible from roads or advertised in any way.

Benefits of activity

- Close by opportunity to enjoy the outdoors during the winter and families often participate in sledding.

Cross country skiing and Snowshoeing

Compatibility with other uses

- Snowshoe etiquette dictates that snowshoeing recreationists should not walk within cross-country ski tracks because divots are created.
- On uphill terrain cross-country skiers require wider space/trails than on level terrain.
- Sometimes difficult for cross country skiers to yield quickly on uphill terrain or steep downhills.

Potential impacts to natural, cultural, scientific, or agricultural values

- Substantial off-trail use, in addition to trail use, is likely and could adversely affect natural values in sensitive areas.
- There are no concerns with vegetation trampling if activity occurs on-trail or snow cover is sufficient.

Relationship to setting

- An Open Space setting is integral to the recreational experience.

Facilities and services

- Minimal facilities are needed (parking, trails, signs). Many cross-country skiers appreciate groomed tracks.

Potential mitigation techniques and staff resources needed

- With adequate snow cover, these activities can be pursued appropriately in any Open Space areas in which passive recreational activities are allowed. If areas need to be designated, criteria for such location-specific determinations include considerations of public safety and resource protection.
- Trail signs are needed to identify and encourage on-trail use (especially in sensitive natural areas).

Benefits of activity

- Close by opportunity to enjoy the outdoors during the winter.

Commercial uses

- Anticipated commercial use considerations may arise in the context of special, organized racing events and should not be allowed.

All-terrain roller blades and mountain boards
--

Must meet criteria

- Potentially unacceptable impacts to vegetation from stopping.

Compatibility with other uses

- All-terrain equipment may generate noise and affect other visitors.
- Fast, uncontrolled participants may not be able to effectively yield to other visitors.
- Safety issues associated with participants (off-trail hazards such as rocks and cactus) and potential of run-away boards hitting other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Participants probably desire to be off-trail. Off-trail use could result in damage to sensitive plants and wildlife, agricultural plantings on leased pasture, and disturbance to cultural resource sites. Large number of users could increase impact levels.

Relationship to setting

- Depends on individual motivations, but could occur in more developed settings (e.g., concrete trails and skate parks).

Facilities and services

- Roller bladers would require wider trails (especially when climbing).
- Could cause damage to trails and may require additional maintenance.

Potential mitigation techniques and staff resources needed

- Could restrict off-trail activity and only allow on trails where biking is allowed.
- Establish a yielding priority for uses and clearly mark start of trail and low visibility areas.
- Signs should clearly inform visitors of potential trail uses to increase awareness and minimize conflicts.
- Participants should slow down, be prepared to stop if necessary, and yield to other visitors (especially when approaching from behind). Stricter rules may be needed for high speed uses.
- Need more information on this use.

Benefits of activity

- Provides close by opportunities to participate in new outdoor activities.

Wheeled vehicles (e.g., carts, wagon rides, dog sleighs)

Compatibility with other uses

- Could create conflicts with other visitors if conducted on narrow, heavily used trails due to the greater width of wheeled vehicles.
- Some wheeled vehicle activities could occur of higher speeds and pose conflicts (training dog sleighs for competitive purposes).

Potential impacts to natural, cultural, scientific, or agricultural values

- Off-trail use could trample vegetation and result in erosion.

Relationship to setting

- Could occur along roads and concrete trails, but an Open Space setting may be preferred (safer than roads and more scenic).

Facilities and services

- Adequate trail maintenance is required and wider, low use trails are more suitable.

Potential mitigation techniques and staff resources needed

- Could designate wide, flat trails for this activity or permit on a case-by-case basis.

Benefits of activity

- Could create additional opportunities for people with special disabilities to access and enjoy Open Space.

Commercial uses

- Potential commercial uses for wagon rides and similar activities.

Night time activities (e.g., mountain biking with halogen headlights)

Compatibility with other uses

- Higher degree of caution must be exercised to avoid collision/falls for bicyclists/runners, but not as significant for hikers, snowshoers, etc.
- Bright artificial lights (halogen lights) could distract other visitors and impact adjacent landowners.

Potential impacts to natural, cultural, scientific, or agricultural values

- Wildlife and livestock could be disturbed since they are generally not acclimated to night

time activity by humans and the time period that recreationists could disrupt wildlife would be extended (feeding, access to water, and rest). Need to monitor and collect information regarding impacts to wildlife and livestock (could be additional impacts from activities with artificial lights and night time activities with no lights, but artificial lights probably have a higher potential for disturbance).

Relationship to setting

- Activity dependent, but assume the same relationship as other day time uses.

Facilities and services

- Level of facilities and services is activity dependent, but would need increased ranger presence.
- Generally speaking night time activities are less safe than day time because of decreased visibility.

Potential mitigation techniques and staff resources needed

- Impacts to trailheads and neighbors (partying or vandalism) could be addressed by closing parking lots.
- Safety considerations could be addressed by education efforts and increased patrol by rangers. This would require extending current service periods (monitoring and enforcement).
- Wildlife impacts could be addressed by monitoring to determine if there are significant impacts (may be difficult to determine if from human presence alone or from artificial lighting).
- Many night time activities do not require artificial lighting (e.g., moonlight walks).
- If activity is acceptable as a day time activity, night time use may be acceptable. Night time activities would be more acceptable on open lands with wide trails and good visibility.
- Some existing code of ethics (photography and wildlife) address night time uses and these should be explored and promoted to minimize impacts.
- Could potentially limit the types of artificial lights allowed and for what purposes (needed for activity versus an occasional use such as coming down from a long hike or climb).
- Restrictions on use of artificial lights could pose a potential safety/liability issue.
- Could limit areas where these activities would be allowed. Possibly allow in certain urban areas and not in areas where there would be wildlife concerns.
- Must consider other uses associated with night time (partying, use of artificial lights along commuting trails) when developing management techniques.

Benefits of activity

- Allows for after work relaxation and exercise and provides an opportunity for participants to experience nature in a nocturnal setting.

Commercial uses

- Commercial use may be preferred because groups can be responsible for each other.
- Increased numbers generally mean increased noise and limiting the number of participants may reduce conflicts with neighbors and wildlife.

Model glider flying

Must meet criteria

- Motorized uses are not allowed and would not meet the "must meet criteria."

Compatibility with other uses

- Model gliders could create aesthetic or noise (if motorized) concerns for other visitors.
- Most glider flying occurs off-trail and is likely to concern some users.
- Proximity to roads and highways and other users could result in collisions.

Potential impacts to natural, cultural, scientific, or agricultural values

- Primarily occurs off-trail and could result in additional disturbance to native plants (from glider crashes and off-trail use associated with activity, wildlife (particularly raptors), and agricultural crops and livestock (also a consideration for other activities).

Relationship to setting

- An Open Space setting is not essential and could be provided in a developed park setting.

Facilities and services

- Adequate parking areas and access to Open Space is needed. There are few, if any facilities in existing areas where this activity occurs resulting in unsafe roadside parking and potential creation of social trails.

Potential mitigation techniques and staff resources needed

- Could limit uses to certain areas or only by permit (with possible limits on locations, seasons, time periods, etc.).

Benefits of activity

- Provides outdoor recreation opportunities for handicap visitors.

Orienteering

Compatibility with other uses

- Most orienteering events occur off-trail and are likely to concern some users.
- Sometimes flagging and other materials are used which could create an aesthetic concern to other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Primarily occurs off-trail and could result in additional disturbance to native plants, wildlife, and agricultural crops and livestock. Off-trail use is likely to cause more disturbance than trail activities.

Relationship to setting

- An Open Space setting is not essential and could be provided in a developed park setting.

Facilities and services

- Off-trail use may pose higher risk of encountering hazards.

Potential mitigation techniques and staff resources needed

- Small groups could be allowed and no materials should be left behind.
- Heavy off-trail use would not be appropriate because of impacts to natural, cultural, scientific, or agricultural values and use levels could be limited (most sensitive areas first and least sensitive last). This type of activity would not be appropriate in areas where on-trail use is essential to protect the ecosystem or visitor.

Benefits of activity

- Provides an opportunity to learn important outdoor skills which may prevent people from getting lost.

Commercial uses

- Emphasize leave no trace concepts when permitting and use on-trail as a preference.
- Groups should be limited to ten or less participants to minimize impacts.
- Education and enforcement should be used to minimize concerns.

Hang gliding

Compatibility with other uses

- Generally compatible with other uses because of limited season (primarily practiced from April through September), low levels of use (approximately 25 active Boulder pilots averaging 10 to 12 flights per week during the season), very little trail use is involved in the activity, most but not all launch sites occur on private land, and most landing activity occurs on flat terrain, often park land, majority of flight is spent at

altitude where other users of Open Space don't see the activity, and the activity is virtually noiseless.

- The only potential to interface with other Open Space visitors is on the landing. The pilot has significant control of the aircraft should a change in his flight path be required to avoid an unforeseen conflict.
- Potential to "spook" horses and startle other visitors.
- Participants often erect temporary streamers for a visual wind direction reference. Streamers left on-site could be considered an aesthetic concern by other visitors.
- On Open Space launch sites there are few, if any, facilities available (parking and easy access) which could create parking in neighborhood streets and trespassing problems.

Potential impacts to natural, cultural, scientific, or agricultural values

- Little off-trail activity occurs in the participation of this sport when participants launch from private lands. On Open Space launch sites, participants are primarily off-trail and could create social trails and could result in impacts to plants and animals (especially in fragile shale barren communities in north Boulder).
- Vegetation trampling could occur where participants launch from Open Space or in areas where they disassemble their equipment and load it on their vehicles. This occurs within 10-20 feet of the parking area and typically at the roadside. The activity is not practiced in wet weather.
- Effects on wildlife (particularly raptors) are unknown.
- Potential to "spook" horses and livestock as these bright and multicolored aircraft descend to land, but this activity typically does not occur in these areas.

Relationship to setting

- Hang gliders require a ridge or mountain from which to launch and a relatively flat, unimproved open area to land.

Facilities and services

- No special facilities or improvements are required except for launch sites on Open Space where adequate parking and easy access are useful. Near by automobile access is desirable for the transportation of the disassembled equipment.
- If there were increasing levels of all activities on Open Space, a few well placed signs could mitigate potential impacts to other visitors.
- Good safety track record of 30 years of hang gliding activity. A Liability insurance policy is paid for by local participants and names the city of Boulder as a named insured. Accidents occur occasionally and are often severe. Emergency services must be available at all times when paragliding is likely to occur.

Potential mitigation techniques and staff resources needed

- Work with local hang gliding groups to identify additional considerations and ways to mitigate impacts.
- Contact with a representative of the local club is the most direct and effective means of communication and control of those participating in the activity. Signs might help mitigate potential conflicts.
- Potential conflicts could result in a situation where the activity would require exclusive use. If so, a permit or rental system should be considered.
- Could establish a permit system.
- Could designate use to certain areas (both individual and commercial uses).
- User groups should be required to mitigate trail damage.

Benefits of activity

- There exists a strong aesthetic and scientific value for spectators and participants of the sport.
- Finding the suitable topography and access to parcels of land conducive to the sport of hang gliding presents one of the greatest challenges to current participants of the sport.

Commercial uses

- Hang gliding instruction is very site-specific and the impacts resulting from the instruction of hang gliding will be more significant than those associated with recreational participation. There exists a far greater number of participants involved in instruction, a higher level of activity and a far greater impact in terms of on-trail and off-trail use. Hang gliding instruction is more visible to other Open Space Visitors and will occur more frequently. Currently hang gliding instruction primarily occurs off-trail in the shale barrens in North Boulder Valley (north of Lee Hill Drive and west of Highway 36). These shale barrens are a very fragile plant community and off-trail use could impact this plant community.
- It may require more supervision to manage the commercial activity and direct communication with those providing the instruction would be effective. A permit process may be a very viable mechanism to manage this activity.
- Many participants feel that if commercial training was not allowed, it could virtually eliminate the sport (because of technical nature of activity and need to be properly trained).

Paragliding

Compatibility with other uses

- The activity is virtually noiseless.
- Streamers left on-site could be considered an aesthetic concern by other visitors.
- On Open Space launch sites there are few, if any, facilities available (parking, trails, and easy access) which could create parking in neighborhood streets and trespassing problems.
- The only potential to interface with other Open Space visitors is hiking to launch sites and on the approach to landing. Paragliders generally have less control of the aircraft and could land on other visitors.
- In areas where horseback riding occurs, there would be a potential to "spook" horses as these bright and multicolored aircraft descend to land.

Potential impacts to natural, cultural, scientific, or agricultural values

- Currently most of this activity occurs off-trail (or on undesignated trails) and could impact native plants and wildlife. Off-trail use could result in damage to sensitive plants and wildlife, agricultural plantings on leased pasture, and disturbance to cultural resource sites. Large number of users could increase impact levels.
- Effects on wildlife (particularly raptors) are unknown.
- There are significant impacts at one of the existing popular launch sites (large area where vegetation is trampled and denuded from constant launch preparation).

Relationship to setting

- Paragliders require a ridge or mountain from which to launch and a relatively flat, unimproved open area at the base of the ridge to land.

Facilities and services

- No special facilities or improvements are required except for launch sites on Open Space where adequate parking and access trails are useful.
- Accidents occur occasionally and are often severe. Emergency services must be available at all times when paragliding is likely to occur.

Potential mitigation techniques and staff resources needed

- Paragliding could be designated to certain areas. Some factors to consider when evaluating potential areas include availability of parking and trails, environmental sensitivity of an area, and ease of signing and informing participants.
- Could create a permit system.
- Should obtain more input from paragliding organizations and participants on potential ways to mitigate concerns.

Benefits of activity

- There exists a strong aesthetic and scientific value for spectators and participants of the

sport.

- Finding the suitable topography and access to parcels of land conducive to the sport of paragliding presents one of the greatest challenges to current participants of the sport.

Commercial uses

- The majority of current paragliding use is from commercial paragliding instruction schools. Without proper training this activity can be very dangerous.
- Paragliding instruction is very site-specific and the impacts resulting from the instruction of paragliding will be more significant than those associated with recreational participation. There exists a far greater number of participants involved in instruction, a higher level of activity and a far greater impact in terms of on-trail and off-trail use. Currently paragliding instruction primarily occurs off-trail in the area west of Wonderland Lake.

Rock climbing (with and without permanent fixed protection)

Must meet criteria

- Most bolts are put in with a motorized drill and would not meet the "must meet criteria."

Compatibility with other uses

- Aesthetic concerns can result from slings (left tied to trees, rocks, and bolts) and shiny bolts, chalk residue, rust from permanent anchor, and the sight of climbers on rock faces may offend some visitors. Climbers often shout commands to each other which could disrupt other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Off-trail use when hiking to and from rocks can damage plants, interfere with wildlife, and may disrupt scientific values. Rock climbing during mating/nesting season can impact cliff nesting birds. Social trails may develop causing vegetation trampling and eventually soil erosion (especially in steep areas surrounding rock formations) and further spread of non-native weeds.
- Permanent anchors (bolts) require drilling holes in the rock, may cause visible rust stains on the rock, impact lichens and other vegetation, and often open up new areas to recreational use that have not been climbed by traditional methods potentially resulting in further fragmentation of plant and animal habitat.

Relationship to setting

- Although rock climbing can occur in a gym, rock climbers usually enjoy being in an

Open Space setting.

Facilities and services

- Permanent anchors are often used and would require periodic inspection and maintenance.
- Additional visitor services are necessary for monitoring and enforcement of raptor closures. Climbing accidents do occur and are often severe. Emergency services must be available at all times when climbing is likely to occur.

Potential mitigation techniques and staff resources needed

- Aesthetic and noise concerns could probably be managed by educational efforts to encourage climbers to wear natural colors and minimize communication during the climb.
- No new permanent anchors should be placed, unless a very compelling need is demonstrated and potential impacts could be minimized. If existing anchors are replaced, they should be replaced with anchors that will not rust. Nylon slings left behind for rappelling purposes should be natural in color and used only when absolutely necessary.
- Impacts to natural values is the most serious concern of rock climbing and management should focus on minimizing impacts by continuing raptor closures as needed (through education, monitoring, and enforcement) and establishing one standard “least harmful” route to rocks which are frequently climbed while discouraging other approach/descent routes. Education efforts would also be useful, but may be insufficient because of the number of climbers who do not reside in the vicinity of Boulder. If usage levels in an area result in a significant amount of harm, it may be necessary to close that area or limit when it may be used.
- Management of safety issues should focus on educating new climbers to the seriousness of accidents that can and do happen and encouraging them to learn on artificial climbing walls and then use only safe techniques. In addition, some of the costs of rescuing climbers should be borne by the climbers themselves and/or the climbing community. If too many accidents occur on any particular climbing route or rock, it may be necessary to close it or limit usage to well experienced climbers only.
- A permit system could be developed for replacement of old, unsafe bolts or for placement of new bolts.
- Could work with climbers to improve access trails and eliminate problem areas.

Commercial uses

- Instruction in rock climbing should begin on artificial walls and then move outdoors. There are currently several areas outside of Boulder’s greenbelt that accommodate climbing instruction. There are few, if any, rocks on Open Space that would be

- appropriate for climbing instruction due to their distance from trailheads, type and difficulty of climbs, and impacts to natural values and other visitors as noted above.
- Individual instruction of one or two climbers from time to time is probably fine and may not need to be regulated except that each instructor should obtain a yearly permit and instruct students on how to mitigate the impacts of rock climbing. Any advertising should be minimal and local only.

Non-motorized boating (such as kayaking, canoes, wading, swimming)

Compatibility with other uses

- Significant increases in activity use levels could impact other visitor's experiences and could create conflicts between individuals participating in these activities.
- Participants sometimes trespass and cause property damage to private landowners when boating (particularly during put in and take out)

Potential impacts to natural, cultural, scientific, or agricultural values

- Water related recreational activities could impact natural values by disturbing wildlife and fragmenting plant and animal habitat. Many rare and sensitive species depend on riparian areas for food and shelter.
- There could be impacts to riparian vegetation during put in and take out.

Relationship to setting

- Activity dependent and will vary significantly between individuals. All activities are obviously dependent upon water, but some are more dependent on an Open Space setting than others.

Facilities and services

- These activities typically require a higher level of equipment.
- Additional visitor services may be required to ensure a safe recreational experience due to higher risks associated with these activities.

Potential mitigation techniques and staff resources needed

- Generally recreational uses of streams and lakes are not compatible with Open Space purposes and other places are much more suitable for things like swimming and boating. If swimming and boating were to be allowed, they would have to be limited to no special development and designated to certain appropriate areas (depending on specific values of each site such as access and quality or restoration potential of natural values).
- Impacts on adjacent landowners might be alleviated by signs encouraging participants where to go, posting private lands, and law enforcement.

Competitive sporting events

Must meet criteria

- This activity does not meet the “must meet criteria.”

Compatibility with other uses

- Because of the nature of competitive sporting events, there is a serious potential for conflicts with other visitors. Participants generally are more concerned about the competitive event and scoring or finishing well rather than being courteous to other visitors. These type of events generally involve large numbers of participants and spectators and could cause conflicts with other visitors.
- Extensive markings are sometimes required and could create aesthetic concerns for other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Competitive events can occur on and off-trail. Off-trail uses could damage native vegetation and disrupt wildlife. On trail uses may cause other visitors to go off-trail and cause impacts to natural, cultural, scientific, or agricultural values.

Relationship to setting

- Can occur in a variety of settings and more developed settings are available.

Facilities and services

- Often require extensive facilities and staff to ensure compliance, safety of participants and other visitors, and to minimize conflicts.

Potential mitigation techniques and staff resources needed

- This activity is not compatible with Open Space criteria and should not be allowed. If allowed, it should occur only in limited areas.

Commercial uses

- Most competitive events involve fees and prizes.

<p>Harriering (Hash House harriers): activity where participants run along a random course marked by flower or sugar. All of the previous considerations listed for running apply and these additional considerations should be evaluated.</p>

Compatibility with other uses

- Markings left behind may be unattractive to other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- Disturbing wildlife is likely because a significant amount of off-trail use occurs. Off-trail use could result in damage to sensitive plants and wildlife, agricultural plantings on leased pasture, and disturbance to cultural resource sites. Large number of users could increase impact levels.

Relationship to setting

- Can occur in a variety of settings.

Paint ball games

Must meet criteria

- Unacceptable impacts to other visitors and natural, cultural, scientific, and agricultural values.

Compatibility with other uses

- Paint residue may be unattractive to other visitors.
- Other visitors could be hit by paint balls and would not have adequate safety gear.
- Weapons used in this activity create a loud, gun-like noise which could disturb other visitors.

Potential impacts to natural, cultural, scientific, or agricultural values

- High likelihood of off-trail use. Off-trail use could result in damage to sensitive plants and wildlife, agricultural plantings on leased pasture, and disturbance to cultural resource sites. Large number of users could increase impact levels.
- Fast paced nature of this activity and noise could further disrupt wildlife.

Relationship to setting

- Could occur in other settings (developed parks, amusement centers).

Potential mitigation techniques and staff resources needed

- This activity is not compatible with Open Space criteria and should not be allowed.